

**Notice of Allowability**

Application No.

09/919,074

Applicant(s)

HOADLEY ET AL.

Examiner

Art Unit

Elda Milef

3692

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/22/2007.
2. ☒ The allowed claim(s) is/are 2,3,8,10-12,14,15 and 20-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 5/25/2007
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

This Office Action is responsive to Applicant's response filed May 22, 2007.

***Allowable Subject Matter***

Claims 2,3,8,10-12, 14,15,20-24 are allowed. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

The following is an examiner's statement of reasons for allowance: the prior art fails to teach or suggest the limitations of the independent claims.

Independent claim 10 discloses a method for explaining credit scores comprising defining a credit score as a function of prediction characteristics; defining a surrogate set of characteristics as representing area of improvement; developing a surrogate score to approximate a real credit score as a performance (dependent) variable and using said surrogate characteristics as predictors; and defining a potential improvement metric for each area of improvement. Dependent

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claims 2, 3, 8, 11, 12 are allowable as they follow from the allowable independent claim 10.

Independent claim 22 discloses a system for explaining credit scores comprising defining a credit score as a function of prediction characteristics; defining a surrogate set of characteristics as representing area of improvement; developing a surrogate score to approximate a real credit score as a performance (dependent) variable and using said surrogate characteristics as predictors; and defining a potential improvement metric for each area of improvement. Dependent claims 14, 15, 20, 21, 23, 24 are allowable as they follow from the allowable independent claim 22.

The primary difference between the claimed invention and the prior art is the improvement metric step is defined as

$$I_k = 100 \times \frac{\max_{z_k} \{ \Psi(z_1^*(z_k), z_k, \dots, z_p^*(z_k)) - \Psi(z_1^*, \dots, z_k^*, \dots, z_p^*) \}}{\text{Score}^*}$$

= Maximum possible percent improvement in score for Area of Improvement k.

where  $z_1^*(z_k) = z_1^*$  unless  $z_1^*$  cannot coexist with  $z_k$ , wherein in that case  $z_1^*(z_k) = E[z_1 | z_k]$ , or some other value  $z_1$  that can coexist with  $z_k$ .

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While the prior art discloses a system, method, and apparatus for evaluating, delivering and explaining credit scores to a consumer via a web site (Brody et al., PG Pub. No. 2002/0077964), the prior art does not disclose the potential improvement metric as defined above. Prior art do disclose accepting reason codes from individual consumers or third parties and displaying reasons for FICO scoring, (Lent et al., US Patent No. 6,324,524), however, the art again does not disclose a potential improvement metric as defined above.

Internationally filed patent application WO 97/22073 discloses a system and method for performing on-line review and approvals of credit but does not disclose defining a credit score as a function of prediction characteristics; defining a surrogate set of characteristics as representing areas for improvement, nor a potential improvement metric.

"Score One for Open Credit Ratings" by Michelle Singletary, published in the Washington Post on June 18, 2000, discloses displaying for the consumer, individual credit scores in relation to highest possible credit score as well as details of the factors used in the FICO credit-scoring model. The art, however, does not disclose defining a credit score as a function of prediction characteristics; defining a surrogate set of

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characteristics as representing areas for improvement, nor a potential improvement metric.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elda Milef whose telephone number is (571)272-8124. The examiner can normally be reached on Monday -Thursday 8:30 am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571)272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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